Arduino-Based MIDI Drum

System

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SUMMARY

The MicroDRUM is the most economical and simple-to-build MIDI drum trigger. It's based on an Arduino and can be used with a huge variety of e-pads / e-cymbals; up to 48 inputs!

I'm working on the first edrum module completely controlled by an iPad! See it here.

Soon I will add more things to the guide.

Step 1 — Arduino-Based MIDI Drum System
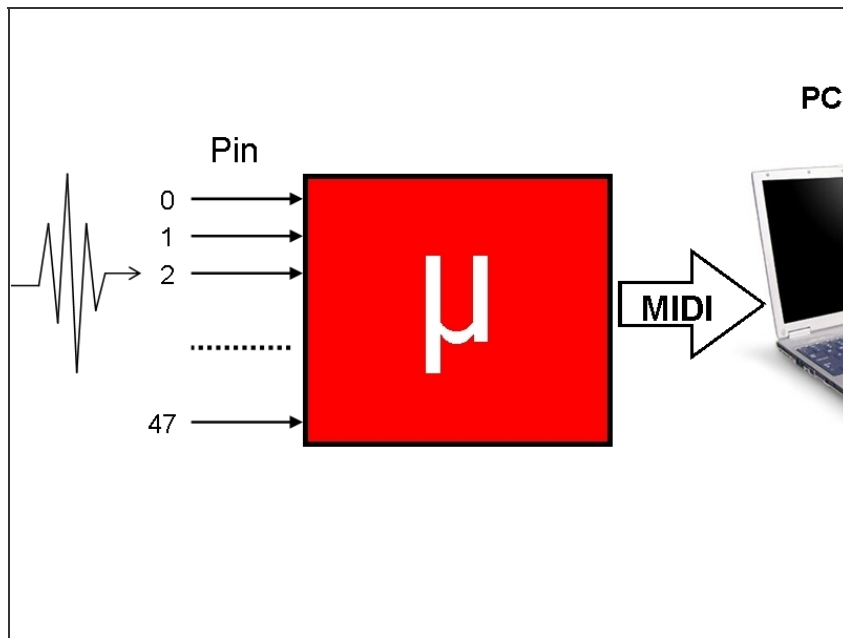
- The microDRUM is a Trigger-to-MIDI controller. In practice, as shown in the drawing, it transforms the impulses generated by the pad (or cymbal) into a MIDI note.

- The idea behind the microDRUM is to create opportunities for anyone to build a drum machine in an economical way. To do this the heart of microDRUM is an Arduino. The microDRUM features:
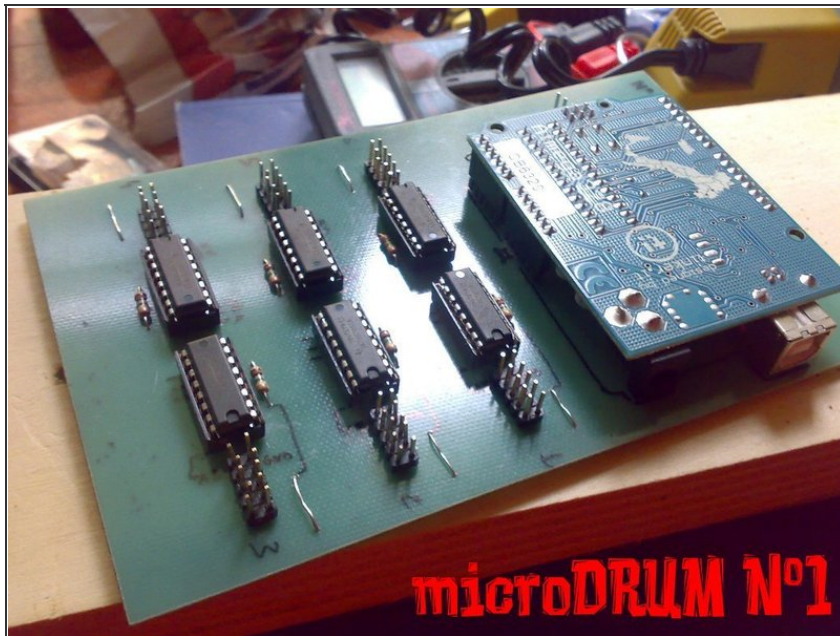
  - 48 trigger inputs

  - MIDI out port

  - USB port (which allows the user to manage the controller and update the firmware)

  - Customizable settings to eliminate multiple-trigger, cross-talk, etc.

  - Supports most types of switch or variable HiHat controllers with CC position or dedicated notes on all zones for 6 levels of intermediate levels of the pedal positions

  - Save settings

Step 2
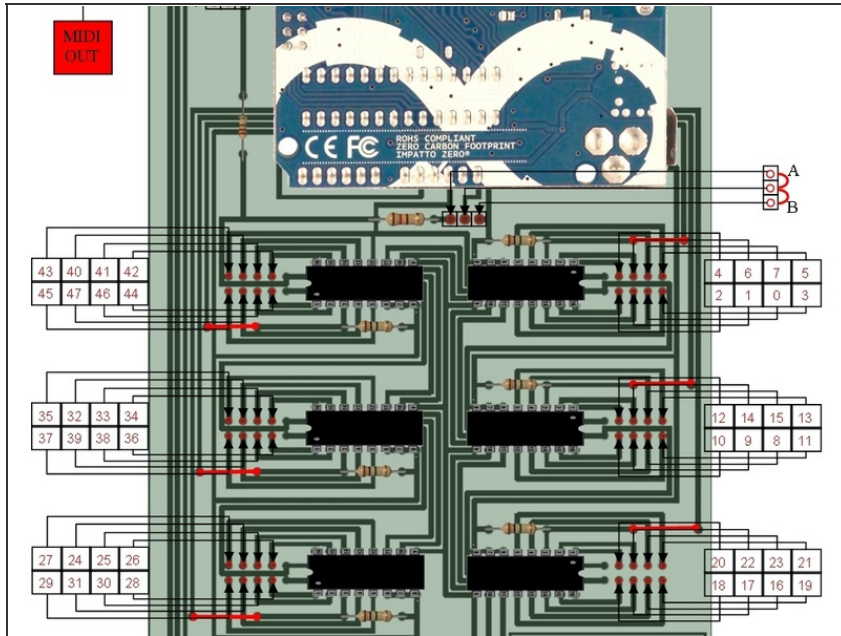
- The construction of the microDRUM is very simple. You can use the "official" PCB or you can create one yourself, or use a matrix board. Starting from the PDF file the board can be made at home without the need for large machinery. In addition to the board, the following material is needed for the construction of the microDRUM: Arduino pins, a bit of wire, 8 resistors, 6 sockets, and six HC4851 chips.

- Schematics, the PCB layout and the software can be found here.

Step 3

- First prototype!
- And here is the first video!!!

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